needed for U.S. companies to be competitive in world markets. By drastically diminishing the number of U.S. companies involved in PCS, nationwide licensing will necessarily limit the number of opportunities for U.S. companies to assume leadership roles in the worldwide deployment of PCS.

Contrary to Bell Atlantic's, MCI's and Time Warner's claims, nationwide licensing could undermine the achievement of standardization and interoperability if a nationwide licensee chose to deploy proprietary technologies as a de facto technical standard. In effect, a nationwide licensee could use his dominant position to block or impede development of other standards even though they might turn out to be superior for technological or other reasons. In any event, we strongly support the joint industry efforts of voluntary standards bodies which we believe are best qualified to develop standards for efficient interoperability and roaming.

Regarding possible economies of scale which are claimed to be uniquely available to nationwide licensees, we find no record of such economies of scale in these proceedings. Nor does Bell Atlantic, Time Warner or any other proponent of nationwide licensing offer any economic analysis in its comments to demonstrate that economies of scale are available for nationwide systems which are not also available for small service areas such as MSA/RSA areas.

Also we see no reason why the inter-system coordination procedures which now apply to the cellular industry are not an appropriate model for PCS industry operations in adjacent MSA/RSA markets. There is also no reason to believe a nationwide consortium enjoys any advantage over a "local" MSA/RSA licensee in terms of resolving interference conflicts with incumbent private microwave operations as suggested by MCI. In fact, a locally-based PCS provider would be in a better position to be responsive to the needs of a private microwave operator than a nationwide licensee who likely will have only indirect contact with any specific local market area.

In response to Bell Atlantic's, PCN America's and Time Warner's claims regarding national marketing, inter-company tariff compensation and standardized billing practices, it is not necessary and would be counterproductive to have nationwide licensees reinvent or control the development of such arrangements as they apply to PCS services. The established arrangements for the billing and collection of charges for the exchange of traffic in the telephone, cellular, mobile telephone and paging industries all demonstrate that such arrangements can be successfully implemented without the intervention of nationwide licensees. We also expect that "local" PCS providers will be able to adopt national marketing and "branding" of services offerings as already demonstrated in the cellular industry by

"Cellular One." The Commission should leave the resolution of such matters to the "local" participants involved.

Finally, we also disagree with PCN America that nationwide licensing should be adopted to create opportunities for massive joint purchasing. We believe that one of the Commission's objectives in these proceedings should be to encourage expanded opportunities for U.S. manufacturers of PCS equipment by establishing a broad base of "local" MSA/RSA licensees to whom they can market their products. The indirect benefits include incentives for continuing product development by a broad range of manufacturers and vigorous competition in price and quality of PCS equipment. "Joint equipment purchasing" by any nationwide licensee would clearly undercut these opportunities.

(b) The Commission Should Reject Major Trading Area Service Areas as Inconsistent With The Achievement of Its Fundamental Objectives.

APC, Cox, PCN/NY, Qualcomm and others argue for the forty-seven Major Trading Areas ("MTA") to be used as service area boundaries. We disagree for many of the same reasons which we listed in opposing nationwide licensing.

MTA licensing imposes heavy costs in terms of diminished consumer benefits by limiting the number of possible PCS providers, limiting the development of diverse and innovative PCS

service offerings, eliminating opportunities for small and/or locally-oriented businesses to become licensees, delaying the deployment of PCS outside densely populated urban areas, and limiting opportunities for the development of innovative technologies.

APC's notion that somehow the "natural" traffic and mobility patterns of PCS users require use of MTA licensing is unsupported by any evidence in the record. The established MSA/RSA boundaries which we support have provided a workable basis for successfully launching the cellular industry and more recently to define markets for the new interactive residential and office video/data (IVDS) services. The natural dimensions of PCS market areas may well be smaller than these MSA/RSA boundaries because the microcellular architecture of PCS, i.e. with base-to-base spacing in the range of 50 to 1000 meters, lends itself inherently to short range "local" service offerings. We support MSA/RSA service areas as a reasonably flexible compromise size to accommodate a range of existing and emerging "local" service offerings.

We also disagree with APC's argument that MTAs are similar in scope to the regional cellular service areas which have evolved under cellular licensing. As documented in our Comments, existing combinations of cellular properties do not follow MTA or

even Basic Trading Area ("BTA") boundaries.[20] In any event, the Commission should not attempt to substitute its judgement about the appropriate market area dimensions at this early stage of the development of the diverse "family" of existing and emerging PCS service offerings. There are clear advantages to starting out with small "local" license areas for all PCS licensees and letting the marketplace determine the most efficient size of the service areas as the PCS industry matures.

APC argues that "local" MSA/RSA service area licensing will slow deployment to the public. We believe that in fact the opposite is true. MTA licensing will impose massive financial burdens upon the few, if any, businesses capable of supporting deployment in such large areas. We expect that such licensing will not result in full coverage but rather lead to a subdivision of each MTA into metropolitan hubs. Rural and other areas outside these densely populated metropolitan hubs may eventually receive service, but only years after service in the metropolitan "core" areas has been established.

Arguments have also been made that MTA licensing will permit operational efficiencies, economies of scale, diminished burdens of frequency sharing with private microwave users and reduced coordination responsibilities with PCS providers in adjacent service areas. Regarding claimed economies of scale, none of the

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[20] Wildman at 29-54.

commenters supporting MTA licensing have presented any evidence that their claimed operational efficiencies or economies of scale are not also available to licensees under "local" MSA/RSA licensing. Also there is no evidence that coordination of PCS frequency uses with other PCS licensees and frequency sharing with incumbent private microwave licensees can not be addressed most efficiently and effectively by "local" PCS licensees whose responsibilities are focused on MSA/RSA service areas.

(c) The Commission Should Also Reject Use Of LATA Boundaries As Wholly Unsuitable For PCS licensing.

We agree with many commenters that LATAs which were created as a means of explaining the subdivision of the old "Bell System" operating areas are not relevant to PCS wireless services. The fact that wireless loop services are among the "family" of PCS services likely to be deployed is no reason to adopt vast LATA service area licensing to facilitate integration of these wireless loop services into RBOC telephone infrastructures. Significantly, not one of the RBOCs commenting in this proceeding supports LATA licensing.[21]

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[21] We also oppose adoption of NTIA's 183 "economic" areas as a needlessly complicated and controversial alternative to the other service area options in the PCS NPRM. NTIA's concept that the Commission should adopt policies that these "areas" can be freely aggregated or subdivided to make the concept work raises serious issues regarding the possible unlawful delegation of the Commission's licensing functions.

(d) Basic Trading Areas Licensing Should Be Rejected As Needlessly Diminishing Opportunities For The Most Effective Development Of PCS Technologies.

We oppose BTA licensing as needlessly complicating the deployment of PCS technologies by imposing new service area designs which were created primarily to meet the needs of retailers, not wireless telecommunication providers. The "regional" dimensions of BTA service areas would diminish opportunities for truly "local" service and for the diversity of locally-based PCS service offerings from what would otherwise be possible under "local" MSA/RSA licensing.

We agree with many of the arguments presented by Ameritech and Pacific Telesis for the adoption of "smaller rather than larger" service areas. Where we differ is on the point that BTA service areas are not small enough. "Local" MSA/RSA service areas will be the most effective means of achieving the participation of the greatest number of PCS providers, the greatest chance of promoting service diversity and innovation, of encouraging small entrepreneurial firms to participate, and of obtaining financial backing for widespread PCS deployment.

(e) PCS licensing Should Be Based Solely Upon "Local" MSA/RSA Service Areas, Not Combinations Of Various Service Area Sizes.

We strongly oppose all proposals to license "different size service areas"[22] because we believe that any such differences diminish the unique advantages arising from exclusive use of "local" MSA/RSA service areas in terms of fostering rapid deployment, incentives for universal coverage, enhanced competitiveness and development of new and innovative service offerings. We agree with the analysis of the DOJ and others that the efficient size of a PCS provider firm will vary over time, by area served, by services provided and by differences in system architectures which are optimized for specific service applications. The Commission should not speculate about the possible size of the contiguous areas which any provider will serve when PCS becomes a mature technology. As described in the Statement of Professor Wildman, there are important public benefits from starting with "local" MSA/RSA service areas to promote opportunities for the most effective owners and managers, development of diverse and numerous PCS services and eventual aggregation of consolidated service areas to meet needs for PCS services which will be defined as the PCS industry matures.[23] Adoption of nationwide or other regional licensing in combination with "local" MSA/RSA service areas will not assist achievement of the many consumer

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[22] PCS NPRM, ¶61

[23] Wildman at 8-34.

benefits from "local" MSA/RSA licensing and cannot help but handicap "local" service opportunities for many PCS services by diminishing the number of "local" licenses.

SECTION III - CHANNELIZATION

20 MHZ CHANNELIZATION PER PROVIDER IS APPROPRIATE AND ADEQUATE FOR FIVE PCS PROVIDERS IN EACH SERVICE AREA

A very large number of commenters including governmental and regulatory entities, such as the DOJ, the SBA and the PaPUC, telephone companies, cellular, CATV and ESMR providers, and small/independent businesses support 20 MHz channelization. As described above, five providers per service area, each with 20 MHz of broadwidth, or a total of 100 MHz of licensed paired spectrum in each service area, will provide opportunities for a large and diverse group of PCS providers to achieve the Commission's goals in this proceeding.

(a) The Commission Should Not Diminish The Number Of Providers Per Market By Adopting 40 MHz Or 30 MHz Channelization.

APC, Omnipoint, PCN America, Time-Warner and others make extensive arguments for adoption of channel bandwidths per operator substantially in excess of 20 MHz channelization. The unstated assumption in all of their arguments is that there should be only <u>two</u> providers in each service area. We have already explained why five PCS providers per markets should be

adopted. There is no reason to assume that five providers, each with 20 MHz of PCS spectrum, will not be able to provide a full range of new and innovative services, including wireline quality voice and data capabilities.

The Telocator PCS Spectrum Estimates For PCS Report ("Telocator Report") referenced in the Comments of the APC, PCN America and others does not present any conclusions about the appropriate number of providers per market. As described here, 20 MHz channel bandwidths with five providers per market will meet reasonable projections for PCS traffic.

In order to demonstrate the reasonable spectrum requirements for five licensed PCS providers in each service area, we obtained recalculations of the "per provider" spectrum requirements for each of the "Scenarios" in the Telocator Report because that report did not show requirements for more than three competing providers. The traffic estimates shown in Attachment 1 to that Report, i.e. estimates representing the "most expected ranges (90% confidence level)" as prepared by the Telocator PCS Marketing Committee were used in the recalculations. Because of the substantial range of these estimates, however, we used the mean of these estimates rather than the highest estimate for each "Service Type."[24]

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[24] Attachment 1 to the Telocator Report shows the substantial range of these estimates. As shown in the "Users in Area"

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Under a five provider model, 20 MHz channel bandwidth per provider is shown to be suitable based on the mean estimates of PCS traffic in the Telocator Report. The spectrum required under "Scenario C" was somewhat less than 20 MHz. Under "Scenario A" and "Scenario D," the spectrum estimates were only slightly more than 20 MHz per provider. The only exception was "Scenario B" which we do not believe is an appropriate model on which the Commission should base allocations decisions.[25]

(b) The Commission Should Not Base PCS Channelization Upon Spectrum Requirements To Compensate For Capacity Restrictions Imposed By Co-Channel Sharing With Incumbent Private Microwave Users.

We strongly oppose the efforts of APC, Omnipoint and others to have the Commission base channelization of PCS spectrum upon

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[24](...continued)
column for each class of PCS service, the range of estimates for each service is as follows:

Service	"Users in Area"	Variation
Telepoint	.2 - 1.6	8
Wireless PBX	.02 - .19	8.5
PTS-Stationary	.05 - .3	6
PTS-Pedestrian	.5 - 3.0	6
PTS-Vehicular	50 - 150	3

[25] We believe that the Commission's allocations decisions should be based upon reasonable expectations for technology advancement over the ten years intended to be covered by the PCS traffic estimates referenced in the Telocator Report. For example, it is not unreasonable to expect improved performance beyond the 32 Kbps voice coding assumed in "Scenario B" and development of technologies and architectures to improve frequency reuse beyond the "reuse = 24" factor assumed in this scenario.

projected unavailability of some portion of that spectrum in theoretical "preclusion zones" in certain service areas.

The Commission is addressing in its Emerging Technology docket procedures to facilitate the transition to PCS spectrum uses in service areas where there is substantial private microwave utilization. We see no need to diminish the incentives for PCS licensees to seek voluntary agreements with incumbent private microwave users. In extreme cases, adoption of a transition period shorter than eight or ten years may be useful to give PCS providers access to useable spectrum in a reasonable time frame. If it turns out that preclusion caused by incumbent private microwave users is primarily a problem in a few densely populated urban core areas, the adoption of procedures to address the needs of these special problem areas in the Emerging Technologies docket is clearly the most efficient and effective regulatory solution.

(c) The Commission Should Not Base PCS Channelization Upon Speculative Relationships Between Channel Size And Potential Profitably Of Individual PCS Operations.

It is not useful for the Commission to attempt to measure the potential "profitability" of different spectrum block sizes as suggested in the DOJ's Comments. Selection of the spectrum block size to be assigned to any PCS provider necessarily involves a compromise of interrelated factors affecting profitabil-

ity, many of which will remain unknown until PCS is fully deployed. Nor can any analysis be expected to prejudge accurately the many factors which could lead to aggregation of service areas, the scope of business relationships between PCS providers in any market or the possibility that spectrum blocks in a particular market might be under a single licensee at some future date.

Insofar as current information can be helpful, however, the analysis prepared by David P. Reed of the Commission's Office of Plan and Policy (OPP Working Paper No. 28) suggests that within the range from 10 MHz to 40 MHz, changes in spectrum block size cause only very minor differences in the average PCS system costs per subscriber (See Reed, Table 4, p. 21). Based upon these figures, use of the 20 MHz spectrum block size which we support is entirely feasible.

(d) Cox's Claim That 25 MHz or more PCS Spectrum Is Needed For Each Provider Of Wireless Local Loop Services Is Unsupported Speculation And Should Be Rejected.

Wireless loop service is only one of the "family" of PCS services likely to be implemented. Cox presents no findings or other analysis of what the overall market demand for PCS services might be, what portion of that demand comprises wireless loop services, or what share of the market any competitive "wireless loop" provider might serve. Nor does it identify the assumptions

upon which it based its conclusions that more than 25 MHz of spectrum per provider is needed for such wireless loop services, including use of current vs. future technologies, duplex channel bandwidth requirements, frequency reuse ratios, coverage and propagation variability, among other matters. In the absence of any credible support for its claims, the Commission should reject Cox's proposals.

(e) The Commission Should Not Adopt Multiple Spectrum Block Sizes Thereby Establishing Different Classes Of PCS Providers.

We oppose the proposals of Ameritech and Motorola to establish combinations of different spectrum block sizes which effectively would create different classes of PCS providers in each market. Establishment of such different classes of PCS authorizations would undercut valuable opportunities for competition and innovation. In the long run, the PCS industry is likely to do a better job of meeting its customers needs if all providers, each operating with comparable spectrum resources, initially launch a range of competitive technologies, features, and marketing approaches.[26]

[26] We oppose the proposals of Interdigital, PCN Communications, and Pertel to base channelization upon the spectrum needs of certain broadband CDMA radio access technologies, which require 40 MHz channels at a minimum. We also oppose Time Warner's suggestion that requirements for "support service functions", i.e. trunking capacity connecting base station and switch facilities, be taken into account in determining the size of the PCS spectrum block assigned to any PCS provider. Such functions should be provided via non-radio technologies or via radio in spectrum bands above 2 GHz and in no event should be considered

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SECTION IV - LOCAL EXCHANGE CARRIER PARTICIPATION

THE ELIGIBILITY OF LECS TO HOLD PCS LICENSES SHOULD NOT BE LIMITED BECAUSE OF CELLULAR HOLDINGS

All of the economic analyses filed agree with TDS's recommendation that LECs should be allowed to acquire PCS licenses in their telephone service areas under the same conditions as other PCS applicants. These studies point to economies of scope between PCS and local landline telephone services, as well as the LECs' ability to develop mass markets for PCS services.[27]

(a) LECs Should Not Be Precluded From Participating In The Universal Deployment Of PCS Services Within Their Exchange Areas.

Some commenters still argue that LECs will have competitive advantages in the deployment of PCS services, will cross-subsidize their PCS services and will discriminate against other providers. Their arguments are based upon unwarranted speculation, inaccurate or biased interpretations of prospective PCS marketplace conditions and ignore the appropriate role of regula-

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[26](...continued)
as a basis for diminishing the number of providers authorized in each service area.

[27] DOJ at 30: NTIA at 32; Hausman (filed by Pacific Telesis) at 3; Schmalensee and Taylor at 32; Kahn at 8-9; Doyle at 4-5; Byrnes and Townsend at 10. See also Reed at 29-32 ("Telephone companies could offer billing, administrative,and network maintenance services, or use network signalling, switching and transmission components".).

tory safeguards to address cross-subsidization and discrimination.

In our Comments, we described the critical importance of providing LECs access to PCS technologies to meet their responsibilities both in terms of cost-effective provision of existing services and the universal deployment of innovative PCS service offerings. LECs also have longstanding commitments to "local" community service, knowledge of local conditions and sensitivity to local needs. In some areas, particularly rural and sparsely populated areas, these capabilities will make possible the early deployment of PCS services which might not otherwise be offered for many years. The Commission has already tentatively concluded that such LEC participation would serve the public interests, a conclusion which is broadly supported on the record here.

Nor do claims of so-called "competitive advantage" justify excluding LECs or any other providers from eligibility. The fact is that LECs as well as a large number of other established telecommunications providers have technical, financial, managerial and other qualifications not shared by some other applicants. CATV, alternative access providers and many others also have extensive management and financial resources, experience with "Existing PCS services," established billing and collection experience and plant capacity which can be used to support PCS technology applications. The fundamental objectives of these

proceedings are to foster the publicly beneficial deployment of PCS technologies, which authorizing highly qualified applicants such as LECs, cellular operators and others will do.

The focus here should not be to declare selectively LECs or any other telecommunications provider to be ineligible. Open entry under a licensing structure permitting five PCS providers, each with 20 MHz of spectrum, will support robust competition, rapid deployment, innovative service offerings and universal coverage, the goals guiding the Commission's decision-making in this proceeding. The public will benefit most if each competitor is permitted to take advantage of the experience, skills and other capabilities developed in prior telecommunications activities. If the Commission has specific concerns about discrimination and cross-subsidization by any LEC, non-structural safeguards would adequately address such matters.

(b) LECs Should Not Be Compelled To Use Cellular Spectrum To Implement PCS Services In Their Exchange Areas.

The California PUC and NTIA refer to the possible use by LECs of cellular spectrum, where available, to deploy PCS services in their exchange areas. We oppose adoption of any such restrictions for the reasons previously presented in our Comments.

As described in our Comments (pp. 13-19), the requirements proposed by the California PUC and NTIA would effectively split the vast majority of independent LECs who do not control or

operate cellular systems from that portion of LEC industry which does have cellular operations, greatly complicating if not crippling the participation of this important industry in the development of interoperability and roaming on PCS spectrum. We also described in our Comments how the Commission's preliminary analysis of its options also fails to take account of the fact that the capacity limitations, economic constraints, commitments to support analog as well as digital cellular services, and technical restrictions imposed by established network architectures for cellular services greatly inhibit, if not preclude, use by LECs of cellular spectrum for PCS-type services.

The Commission should also consider the impact of significant design differences between cellular digital interface standards and the emerging PCS interface standards which will restrict the range of "wireline quality" PCS-type services which any LEC could offer using cellular spectrum. As discussed in Section V of these Reply Comments, cellular standards, IS-54 and a pending CDMA cellular standard, significantly inhibit use of cellular spectrum for the wireline quality services which LECs expect to provide. For these and the other reasons described here, it is essential that all LECs have access to PCS spectrum with which to launch new and innovative PCS services.

SECTION V - CELLULAR CARRIER PARTICIPATION

THE COMMISSION SHOULD PERMIT CELLULAR OPERATORS TO HOLD PCS LICENSES TO SERVE WITHIN AND OUTSIDE THEIR CELLULAR SERVICE AREAS

Cellular/PCS cross-ownership within and outside cellular service areas is widely supported in the economic studies filed in this proceeding. Professor Wildman explains that cellular/PCS cross-ownership is appealing because the economies of scope are likely to produce significant cost savings and there is little likelihood of anticompetitive impacts. Economic statements by Schmalensee and Taylor, Charles River Associates (filed by CTIA), Kahn, and Byrnes and Townsend come to the same conclusion.[28] In particular, Schmalensee and Taylor find that the joint supply of PCS with an existing cellular service may be the only economical way to supply PCS services in some (particularly in rural) areas; the potential price increases from cellular/PCS cross-ownership are very small and far less that the potential efficiency gains from integrating cellular and PCS services; there may be difficulties in obtaining certain PCS customer premises equipment for use in the cellular bands; and the amount of unused cellular spectrum in major markets is small.

Reed also finds strong economies of scope; a "PCS network of microcells and a cellular network of macrocells could share portions of the switching, backhaul, cell site, and handset

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[28] Schmalensee and Taylor at 18-20; Charles River Associates at 4; Kahn at 8; Byrnes and Townsend at 24-26.

costs.[29] He concludes that any anticompetitive impacts of cellular/PCS cross-ownership would be small, and cellular carriers ought to be eligible for PCS licenses.[30]

In contrast, both the DOJ and NTIA base their oppositions to cellular/PCS cross-ownership on assumptions which should not be true. The DOJ assumes only three PCS licenses per area and that there are no technological, economic or regulatory limitations preventing cellular carriers from offering PCS services on their cellular frequencies[31] As discussed above, there is strong support for issuing five licenses per area, cellular licensees in many major markets do not have sufficient unused spectrum to offer PCS services, and PCS customer premises equipment may not be usable in the cellular bands. Similarly, five PCS licenses per area would eliminate much of NTIA's concern about anticompetitive effects of cellular/PCS cross-ownership.[32] The DOJ and NTIA also fail to consider the growth of ESMR and other technologies as competitors in the market.

Finally, the proposal by the DOJ and NTIA, that a cellular/PCS cross-ownership restriction be re-examined in three or four years, is likely to lead to a substantial loss of consumer

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[29] Reed at 39.

[30] Id. at 58

[31] DOJ at 24, 29.

[32] NTIA at 27.

welfare as well as uncertainties in the market. The efficient development of PCS technologies, services and networks depends on making available as soon as possible in the PCS market the expertise of cellular operators, their marketing capabilities, and the economies of scope between cellular and PCS networks. The FCC should not handicap the all-important early developmental period of PCS by keeping cellular operators out. The uncertainty of regulatory changes will impair cellular and PCS carriers, equipment manufacturers, and the development of PCS technologies and services.

(a) Cellular Carriers Should Not Be Restricted So That They Can Only Offer PCS Services Via Cellular Spectrum In Their Cellular Service Areas.

In response to commenters who argue the cellular operators already have adequate spectrum to implement PCS services, we point out that there are practical limits to the capacity which any cellular system can achieve with analog technologies. In major markets, where usage is already significant, analog cellular systems are at or near design capacity. In such markets, it is not or soon will not be possible to implement PCS-type services via analog capacity to supplement existing cellular services. As cellular continues to grow, this will be increasingly the case in smaller and smaller markets.

Conversion to digital technologies will provide added capacity as claimed by some, but not for "wireline-quality" service capabilities to provide PCS-type services. This is true because cellular industry standards for digital modulation, both IS-54 and a pending CDMA Standard, have RF channel sizes established to be compatible with existing cellular analog channelization. This channelization scheme requires the use of 8 Kbps voice coder technologies ("vocoder") in order to achieve the increased voice channel capacity which digital modulation makes possible. In turn, 8 Kbps vocoder technologies create qualitative limitations upon the types of audio services which cellular operators can offer. Unlike the 32 Kbps voice bit rates assumed in spectrum estimates for 2 Ghz PCS technologies, 8 Kbps vocoders are optimized to recognize voice and to reproduce voice inputs and are not designed to support all of the recommended service capabilities for voice and data services described in the Report of the Joint Experts Meeting on PCS An Interface Standards ("JEM Report"), November 9-13, 1992, pp. 9-13.

Under the preliminary guidelines for PCS air interface standards addressed in the JEM Report, PCS providers would have the option to use 8 Kbps vocoders or 32 Kbps voice bit rates. Under IS-54 or the pending CDMA standard, cellular operators do not have the option to operate with 32 Kbps voice bit rates. The same limitations would also prevent cellular operators from

offering many multi-media and data services via cellular spectrum.

Effectively, this means that any cellular operator who is ineligible to hold a PCS license will as a practical matter only be able to compete with the voice and data service offerings of PCS providers as long as that cellular operator has spare analog capacity, hardly an attractive prospect given the fact that many analog systems will reach capacity in the foreseeable future. Conversion to digital modulation, far from creating truly competitive opportunities with this added capacity, can only lead to a form of unequal competition in which cellular operators cannot be truly competitive for the reasons described above.

The cellular industry is made up of some of the most highly qualified providers of wireless communications services who are in a position to make important contributions to the achievement of the Commission's four objectives. The five-provider PCS market structure which we support offers adequate opportunities for competition to permit adoption of open-entry eligibility policies.

(b) Cellular Carriers Should Not Be Declared Ineligible To Hold Licenses For PCS Spectrum In Order To Protect The Profitability Of Other PCS Providers.

APC, Cellular Services, PCN America, PDM/PCS and PCS/NY argue that the Commission should exclude cellular carriers from eligibility for PCS spectrum in order to assure the viability of the operations of other PCS providers. We strongly disagree.

APC's arguments regarding the possible adverse competitive impact of combined cellular/PCS service offerings upon independent non-cellular competitors are merely rationalizations to try to justify the two-competitor market structure which it has proposed. There are clear economies of scope which make possible important consumer benefits in terms of cost-efficient service if cellular operators are permitted to deploy PCS technologies. The recently released study by David P. Reed of the Commission's Office of Plans and Policy confirms these economies of scope.[33] There is no valid reason to forego such consumer benefits by arbitrarily excluding cellular carriers from eligibility in their cellular service areas when there are ample opportunities for other providers to deploy competitive systems in each service area.

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[33] David P. Reed, Putting It All Together: The Cost Structure of Personal Communications Services, November 1992, pp. 43-45.

SECTION VI - LICENSEE SELECTION METHODS

LOTTERY SELECTION PROCEDURES SHOULD BE USED TO SELECT AMONG COMPETING APPLICANTS, SUBJECT TO STRINGENT REQUIREMENTS TO DETER SPECULATION

We and a large number of other commenters including governmental/regulatory authorities, telephone companies, large and small, cellular operators, numerous independent and start-up businesses, equipment manufacturers and associations of telecommunication providers support adoption of lottery selection procedures. With the adoption of effective measures to deter speculative filings as we have proposed, lottery selection will be rapid, efficient and cost-effective and should be used.

(a) The Commission Should Reject Use Of Auctions For PCS Licensee Selection Even If Statutory Authority Is Granted.

Use of auction mechanisms for licensing PCS providers would be contrary to the fundamental goals of this proceeding. The competitive bidding process inherently favors those applicants with the deepest pockets. Not surprisingly those favoring auction mechanism include many of the largest U.S. telecommunications providers including Ameritech, Bell Atlantic, BellSouth and McCaw among others.

Qualified lottery mechanisms provide realistic opportunities for competitive entry for small business, local companies, entrepreneurs as well as those companies with large financial resources. We and many other commenters have described the